

**REMARKS**

Claim 1 is the sole examined independent claim and stands rejected under 35 U.S.C. § 103 over Yamazaki '841 in view of JP '555. This rejection is respectfully traversed for the following reasons. In particular, it is respectfully submitted that even assuming *arguendo* proper, the proposed combination does not disclose each and every limitation of claim 1.

For example, claim 1 recites in pertinent part, “wherein said third semiconductor layer includes an emitter diffusion layer ... and a peripheral layer [which] includes the impurity of the second conductive type so as to be distributed at a high concentration in an upper part, at a low concentration at the center and at a high concentration in a lower part within the peripheral layer.” Accordingly, the present invention defines a third semiconductor layer which has three concentration regions (i.e., high, low, high) in at least a peripheral layer thereof. In contrast, the alleged “third semiconductor layer” 2 of Yamazaki has only two concentration regions 5 (high) and 8 (low). The “high” concentration region 3 to the right of region 8 as viewed in Figure 2 is NOT part of the alleged “third semiconductor layer” 2. Rather, region 3 of Yamazaki is the base which the Examiner has already relied on as reading on the claimed “second semiconductor layer.”

Indeed, as set forth at col. 3, lines 31-35, Yamazaki expressly discloses that the region 2 *consists* of only regions 5 and low concentration region 8, whereas region 3 is the base region (*see* col. 3, line 24). Accordingly, Yamazaki does not disclose or suggest, *inter alia*, a high-low-high impurity concentration within at least a peripheral layer of a third semiconductor layer in the manner recited in claim 1. It is noted that JP '555 was not relied on by the Examiner to modify Yamazaki to overcome the aforementioned deficiency.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claim 1 because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on all the foregoing, it is submitted that claims 1-5 are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection of claims 1-5 under 35 U.S.C. § 103 be withdrawn.


CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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